

CLAIMS:

1. A cleaning mechanism for a wire electrode of an air purifier device, the air purifier device having a housing, the
5 cleaning mechanism comprising:

a base;

a post having a first end attached to the base and a second end accessible from a location external the housing, the second end of the post being movable from a resting
10 configuration to a cleaning configuration;

a cleaning plate assembly attached to the base, wherein the cleaning plate assembly frictionally contacts the wire electrode when moved relative to the wire electrode, and wherein the cleaning plate assembly is movable within the
15 housing when the second end of the post is moved from the resting configuration to the cleaning configuration.

2. The cleaning mechanism of claim 1 wherein the post is accessible through an opening in an upper surface of the
20 housing.

3. The cleaning mechanism of claim 1 wherein the post is accessible through an opening in a side surface of the
25 housing.

4. The cleaning mechanism of claim 1 further comprising:

a control knob attached to the second end of the post, wherein the control knob has an upper surface;

30 wherein in the resting configuration, the upper surface of the control knob is flush with an upper surface of the housing.

5 5. The cleaning mechanism of claim 1 wherein the
cleaning plate assembly comprises a first plate and a second
plate, each of the first and second plates defining at least
one channel therein.

10 6. The cleaning mechanism of claim 5 wherein the at
least one channel in each of the first and second plates is
non-linear.

15 7. The cleaning mechanism of claim 5 wherein the first
and second plates are substantially identical.

20 8. The cleaning mechanism of claim 5 further comprising
a flexible sheet between the first and second plates.

25 9. The cleaning mechanism of claim 8 wherein the
flexible sheet comprises Kapton.

30 10. An air conditioner comprising:
a housing;
a first electrode;
a second electrode;
a high voltage generator that provides a potential
difference between the first and second electrodes;
a cleaning mechanism comprising:
a base;
a post having a first end attached to the base and a
second end accessible from a location external the
housing, the second end of the post being movable from a
resting configuration to a cleaning configuration;

a cleaning plate assembly attached to the base,
wherein the cleaning plate assembly frictionally contacts
the first electrode when moved relative to the first
electrode, and wherein the cleaning plate assembly is
5 movable within the housing when the second end of the
post is moved from the resting configuration to the
cleaning configuration.

11. The cleaning mechanism of claim 10 wherein the
10 housing comprises a guide rib extending therefrom and the base
comprises a guide member configured to slidingly engage the
guide rib.

12. The cleaning mechanism of claim 10 further
15 comprising:

a control knob attached to the second end of the post,
wherein the control knob has an upper surface;

wherein in the resting configuration, the upper surface
of the control knob is flush with an upper surface of the
20 housing.

13. The cleaning mechanism of claim 12 wherein the
housing defines a gap adjacent the control knob, when the
control knob is in the resting configuration.

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14. The cleaning mechanism of claim 10 wherein the
cleaning plate assembly comprises a first plate and a second
plate, the first plate having a first interlocking member and
the second plate having a second interlocking member, the
30 first and second interlocking members engageable to attach the
first and second cleaning plates.

15. An air conditioner comprising:
a housing having an inner surface;
a guide rib extending from the inner surface of the
housing;
5 a first electrode;
a second electrode;
a high voltage generator that provides a potential
difference between the first and second electrodes;
a cleaning mechanism comprising:
10 a base;
a post having a first end attached to the base and a
second end accessible from a location external the
housing, the second end of the post being movable from a
resting configuration to a cleaning configuration;
15 a cleaning plate assembly attached to the base,
wherein the cleaning plate assembly frictionally contacts
the first electrode when moved relative to the first
electrode, and wherein the cleaning plate assembly is
movable within the housing when the second end of the
20 post is moved from the resting configuration to the
cleaning configuration; and
a guide member attached to the base and configured
to slidably engage the guide rib.

25 16. A method of cleaning a wire electrode in a housing
of an air purifier device, comprising the steps of:

providing a cleaning mechanism having a cleaning plate
assembly in frictional contact with the wire electrode, a post
operatively attached to the cleaning mechanism;

30 actuating the post from a resting configuration to a
cleaning configuration thereby moving the cleaning plate
assembly relative to the wire electrode.

17. The method of claim 16 wherein the post has a first end attached to the cleaning assembly and a second end accessible from a location external the housing, the method
5 further comprising the step of grasping the second end of the post from the location external the housing.

18. The method of claim 16 wherein the post extends through an opening in an upper surface of the housing.

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19. The method of claim 17 wherein the post extends through an opening in a side surface of the housing.

20. The method of claim 16 further comprising the step
15 of scraping debris from the wire electrode as the cleaning plate assembly is moved along a length of the wire electrode.

21. A method of cleaning a wire electrode in a housing of an air purifier device, comprising the steps of:

20 providing a cleaning mechanism having a cleaning plate assembly in frictional contact with the wire electrode, and a post operatively attached to the cleaning mechanism, the cleaning plate defining at least one channel therein dimensioned to receive the wire electrode, the post having a
25 first end attached to the cleaning plate assembly and a second end defining a control knob, the control knob accessible from a location external the housing;

accessing the control knob from the location external the housing;

30 actuating the control knob to move the post from a resting configuration to a cleaning configuration thereby

moving the cleaning plate assembly relative to the wire electrode; and

scraping debris from the wire electrode as the cleaning plate assembly is moved along a length of the wire electrode.